

# Abstracts of JP 04-200692

## JAPIO DERWENT CHEMICAL PATENTS INDEX CHEMICAL ABSTRACTS

-1- (JAPIO)  
AN - 92-200692  
TI - TREATMENT OF AMMONIUM NITRATE-CONTAINING WASTE WATER  
PA - (2000028) OSAKA GAS CO LTD  
IN - HARADA, YOSHIKI; DOI, YASUSHI; MIURA, SHINSUKE  
PN - 92.07.21 J04200692, JP 04-200692  
AP - 90.11.29 90JP-335768, 02-335768  
SO - 92.11.04 SECT. C, SECTION NO. 1002; VOL. 16, NO. 533, PG. 93.  
IC - C02F-001/58  
JC - 13.1 (INORGANIC CHEMISTRY--Processing Operations); 23.1 (ATOMIC POWER--General); 32.2 (POLLUTION CONTROL--Waste Water Disposal)  
AB - PURPOSE: To drastically decrease the concn. of NH(sub 4)- ion and NO(sub 3)- ion by subjecting ammonium nitrate-contg. waste water added with org. matter to wet pyrolysis at specific pH and specific temp. in the presence of a catalyst consisting of a noble metal, etc., and in the absence of oxygen.  
CONSTITUTION: The original water of the waste water in a tank 1 is sent through a line 3 and a line 7 to a heat exchanger 9 by a booster pump 5 and after the water is heated by the high-temp. treated water from a reaction column 19, the water is fed through a line 11 to a heater 15 installed with a boiler 13 and is heated up to a prescribed temp. The catalyst is added to the arbitrary position in the tank 1 or the reaction column 19. The heating by a boiler 13 is stopped when the reaction progresses and attains the stationary state at which the waste water can be maintained at a prescribed temp. The waste water heated up to the prescribed reaction temp. enters the reaction column 19 packed with the spherical bodies and powder of a porous metal through the line 17, and is subjected to a heat treatment in the presence of the catalyst and the substantial absence of oxygen.

-1- (WPAT)  
AN - 92-290264/35  
XRAM- C92-129173  
TI - Treatment of waste water contg. ammonium nitrate at reduced cost - by adding an organic substance and pyrolysing in presence of oxygen and in presence of catalyst contg. noble metals or ions, etc.  
DC - D15  
PA - (OSAG ) OSAKA GAS CO LTD  
PR - 90.11.29 90JP-335768  
NUM - 1 patent(s) 1 country(s)  
PN -- JP04200692 A 92.07.21 \* (9235) 9p C02F-001/58  
AP -- 90JP-335768 90.11.29  
IC1 - C02F-001/58  
AB - JP04200692 A  
Waste water contg. NH4NO3, after adding an organic substance in such an amt. that formula (I) is satisfied, is wet pyrolysed at a pH of 1-11.5, at 100-370 deg.C, in the presence of at least one catalyst of noble metals, noble metal ions and soluble noble metal salts, and in the substantial absence of O2.  
Before the pyrolysis, other than the organic substance, NH3 can be added in such an amt. that formula (II) is satisfied, or at least one of acids (II) and acid forming substances can be added. Other than the organic substances, NH3 and at least one of

acids and acid forming substances can be added.

ADVANTAGE - Waste water contg.  $\text{NH}_4\text{NO}_3$  in high concn. is effectively treated and so concns. of  $\text{NH}_4(+)$  and  $\text{NO}_3(-)$  are remarkably reduced. Construction and operation costs are reduced, so cost for the treatment is reduced. (Dwg.0/1)

FN - WPC67YW1.GIF

L81 ANSWER 1 OF 5 HCA COPYRIGHT 1999 ACS

AN 118:11249 HCA

TI Treatment of ammonium nitrate-containing wastewater

IN Harada, Yoshiaki; Doi, Yasushi; Miura, Shinsuke

PA Osaka Gas Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

PI \*\*\*JP 04200692 A2\*\*\* 19920721 Heisei

AI JP 90-335768 19901129

DT Patent

LA Japanese

AB The process comprises adding org. materials to the wastewater to satisfy the mol ratio of the org. material/ $\text{NO}_3\text{-N}$  at (0.1-0.5):1, and treating the mixt. with catalysts contg. noble metals, their ions, and/or their sol. compds. in the absence of O at pH .apprx.1-11.5 and 100-370.degree. for wet thermal decompn. Optionally, the wastewater is mixed with (a)  $\text{NH}_3$  to satisfy the mol ratio of  $(\text{NH}_3\text{-N})/(\text{NO}_3\text{-N})$  (0.1-2):1 and/or (b) acids and/or acid-forming materials before the decompn. The process is suitable for wastewater from U treatment facilities.